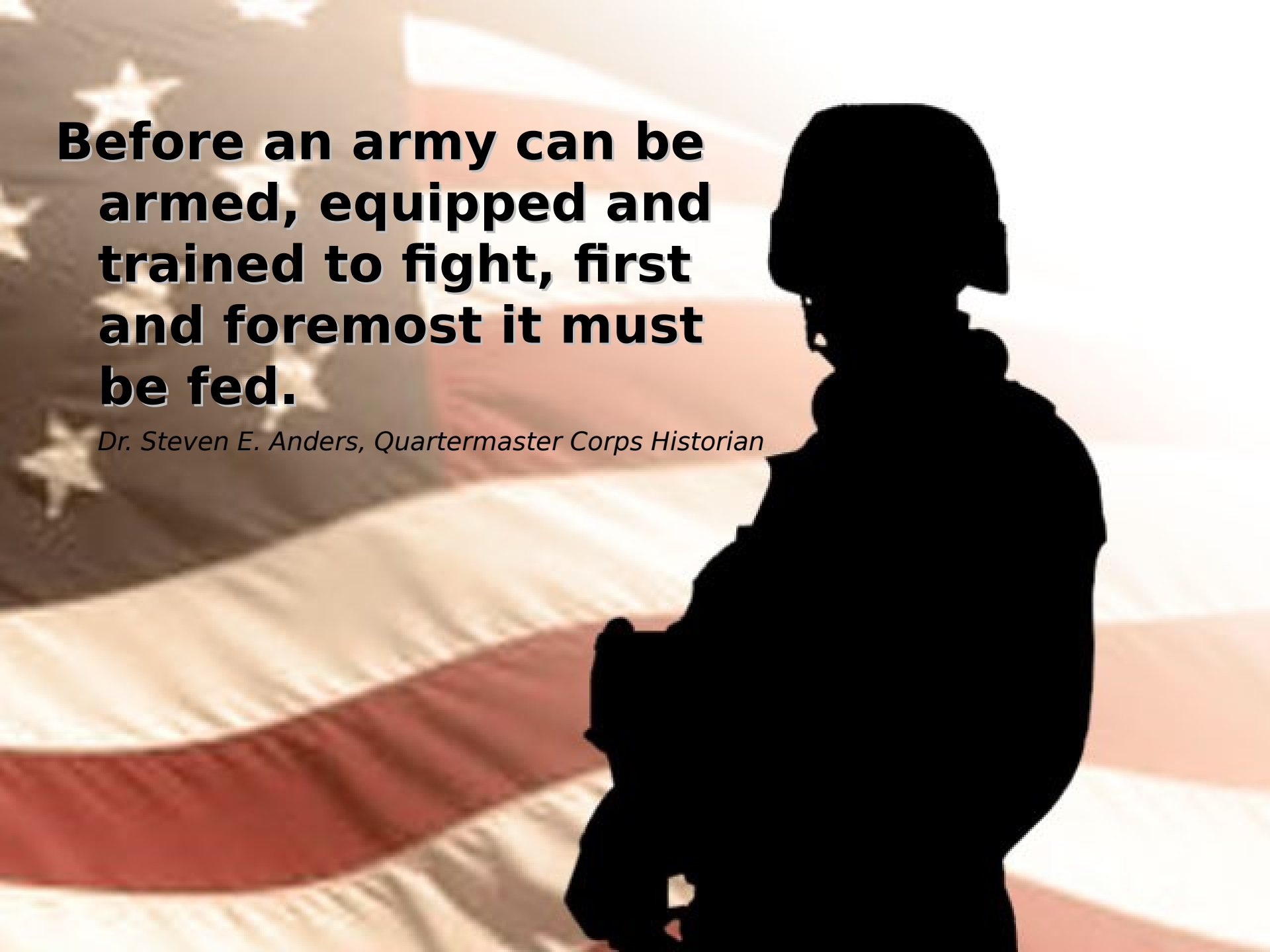
Before an army can be armed, equipped and trained to fight, first and foremost it must be fed.
Dr. Steven E. Anders, Quartermaster Corps Historian

Phillip A. Connelly Evaluators 2008

Food Safety Update

Beyond Sanitation

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http://nationalguardwarrior.com/

AGENDA

- Background
- Food Risk Assessment (HACCP)
- Food Defense (Vulnerability)
- Field Sanitation Team
- Medical Intelligence
- Food Service Hazards
- Food Safety Hit List
- Summary
- Discussion

INTRODUCTION

- US Forces continue to mobilize and deploy in support of the Global War on Terror and Humanitarian Operations
- Environmental and Occupational Health Hazards including **FOOD and WATERBORNE DISEASE** are Significant Medical Threats to Combat Power and Mission Readiness

BACKGROUND

Iraq and Afghanistan 2003-2004 of 15,500 Soldiers Surveyed

- Diarrhea: 76.8% Most Common
- Respiratory Illness: 69.1%
- Non-Combat Injuries: 34.7% (77% requiring evacuation. 3 times greater than combat evacuations)
- Leishmaniasis: 2.1%

Decrease in DNBI and BI during US Conflicts

Statistics for OEF/OIF were obtained from the US Transportation Command Regulating, Command and Control Evacuation System (TRAC2ES)

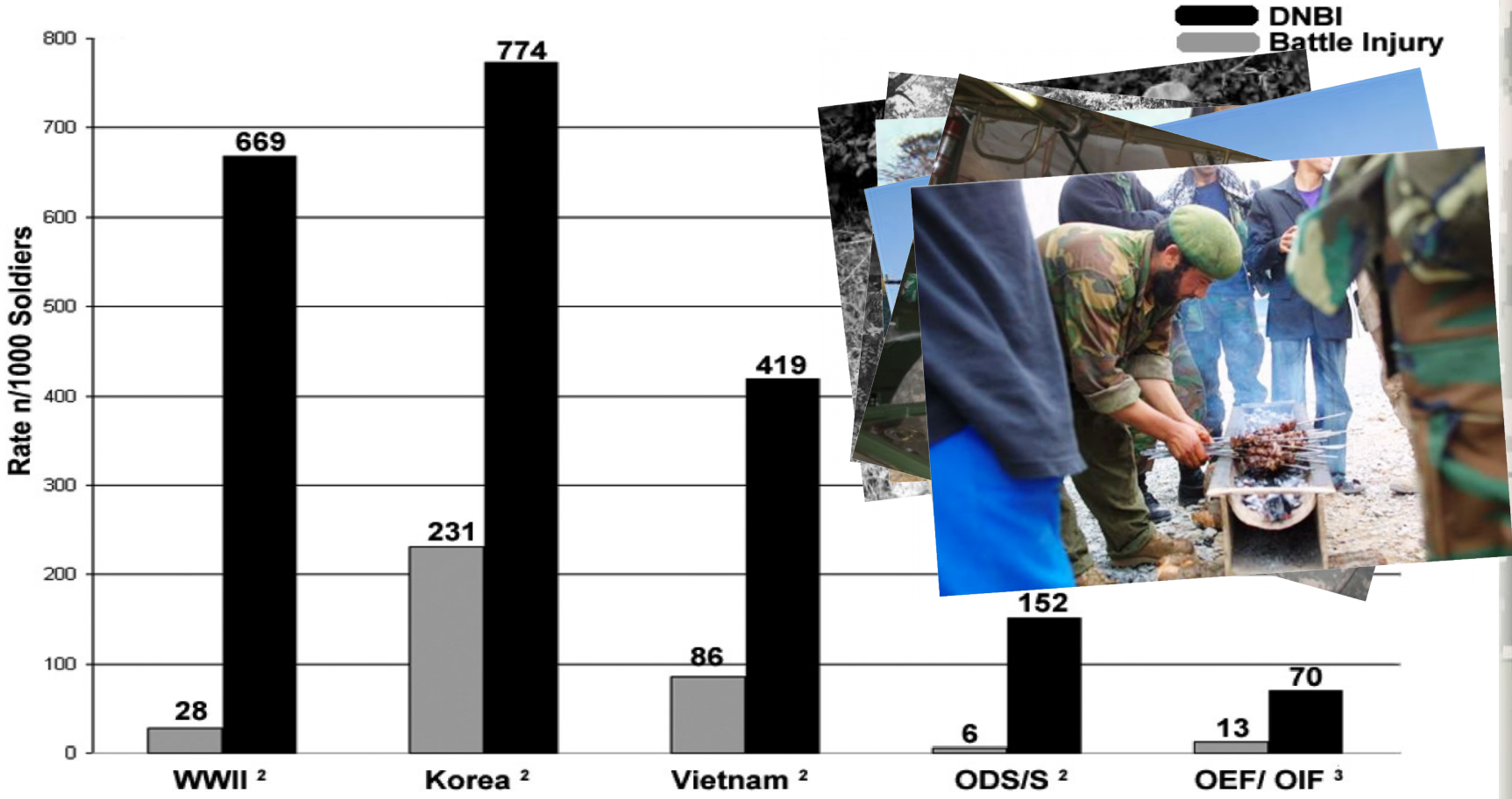
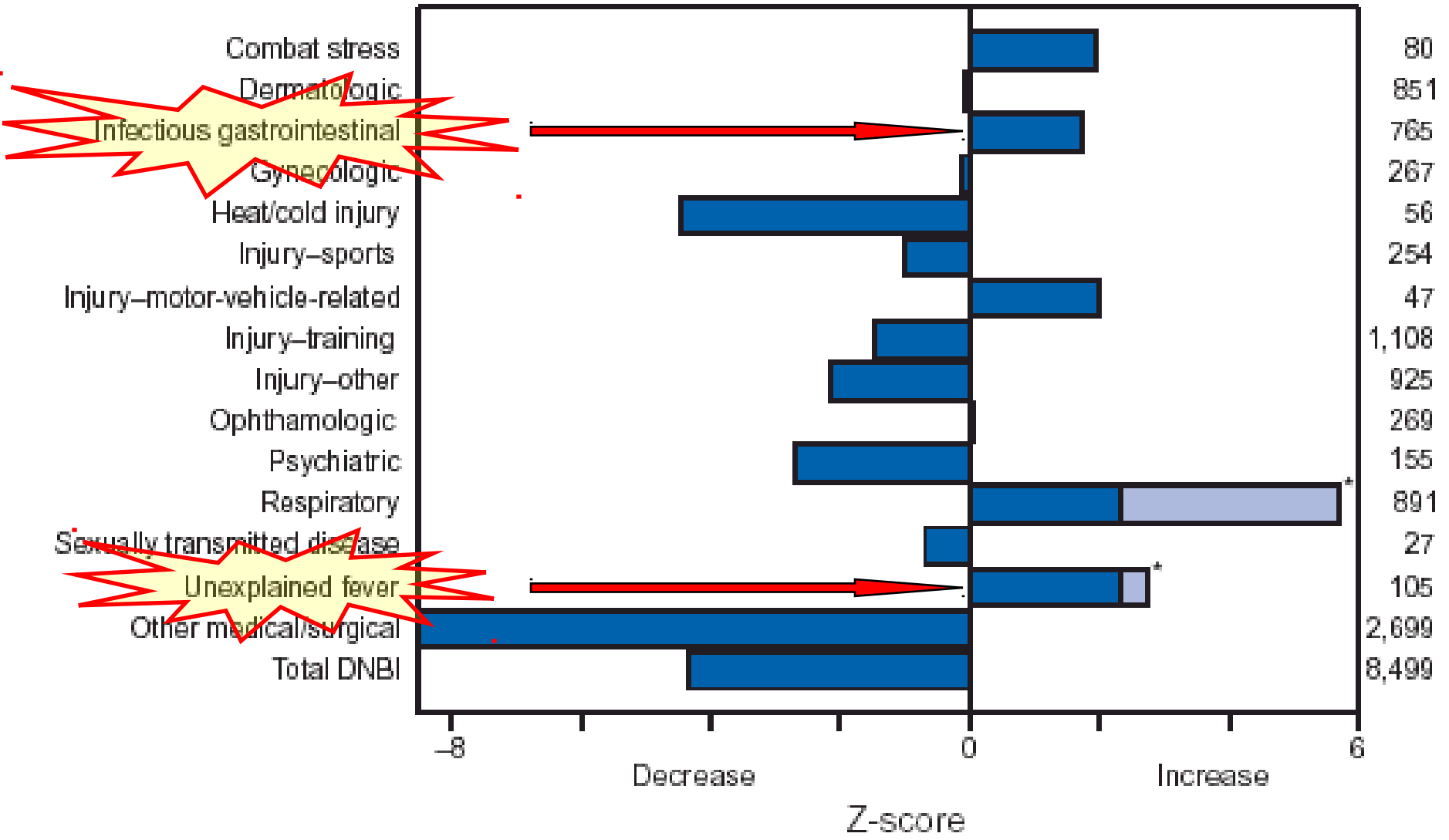
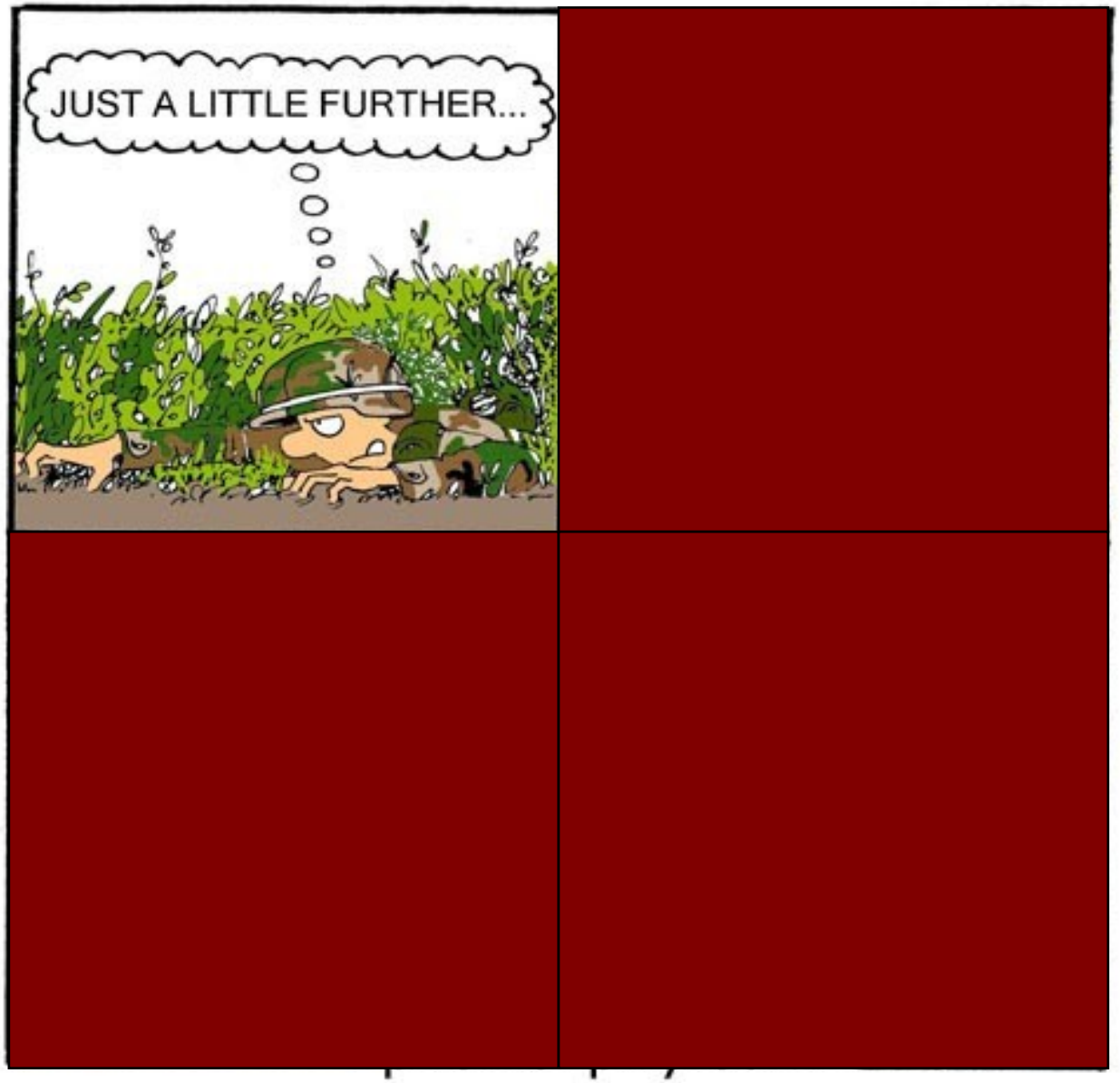


FIGURE. Observed versus expected case counts of 16 categories of disease and nonbattle injury (DNBI) among deployed U.S. military service members, as depicted by a Current-Past Experience Graph — Southwest Asia, week of September 20, 2003



* Statistically significant excesses.


JUST A LITTLE FURTHER...

SUPPORTING VICTORY
U.S. ARMY FOOD SERVICE
Determine Critical Control Points
2
Assess Hazards
Establish Critical Limits
3
Develop Controls & Make Decisions
Monitor CCPs
Develop Corrective Actions
Conduct Hazard Analysis
HACCP
1
Identify Hazards
4
Implement Controls
Establish a Record Keeping System
5
Supervise & Evaluate
Verify Program (Review, Revise, Evaluate)

FOOD DEFENSE

- On February 22, 2007, FDA released the ALERT: Food Defense Awareness web-based training module to ensure that all stakeholders have access to the ALERT message. The purpose of the ALERT web-based training module is to raise awareness of the issues related to food defense.
- This training module will provide stakeholders with the information they need to begin thinking about ways to prevent intentional food contamination within their span of control and facilities.
- The training module can be accessed at http://www.cfsan.fda.gov/~dms/alerttoc.html.

In today's world it is important to be ALERT to protect your business.

A How do you **ASSURE** that the supplies and ingredients you use are from safe and secure sources?

L How do you **LOOK** after the security of the products and ingredients in your facility?

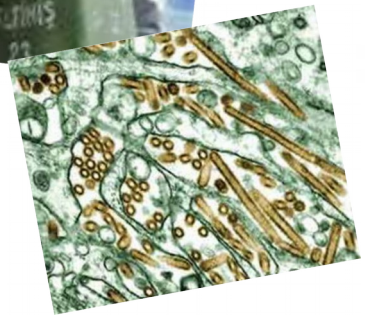
E What do you know about your **EMPLOYEES** and people coming in and out of your facility?

R Could you provide **REPORTS** about the security of your products while under your control?

T What do you do and who do you notify if you have a **THREAT** or issue at your facility, including suspicious behavior?

BACKGROUND

- CBRNE
- Bioterrorism
- Pandemic



FOOD DEFENSE

- **TG 188**, Food and Water Vulnerability Assessment Guide (July 2008)
- **TG 248**, Guide for Deployed Preventive Medicine Personnel on Health Risk Management (August 2001)
- **Food and Water Risk Management**, Veterinary/Medical Supplement to TG 248 (June 2008)

FOOD DEFENSE

- Army Center of Excellence, Subsistence
  - **Environmental Science and Food Safety**
    - CPT Richard Ramos
    - CW4 Ron Biddle
- U.S. Army Center for Health Promotion and Preventive Medicine
  - **Environmental Health and Food Safety**
    - Mr. Tom McNeil
- U.S. Army Veterinary Command
  - **Command Food Defense Program**
    - Mr. Ronald R. Jech (CW5 Ret.)
    - CW2 Frank M. McLaughlin, Food Safety Officer

Hey LT, Connelly's coming and I need a **Field Sanitation Team**.
(c) M. Baker 2003

THE MEDICAL THREAT

- ✓ *Arthropodborne Disease*
- ✓ *Field Water and Ice Quality*
- ✓ *Food Service Sanitation*
- ✓ *Environmental Stress: Heat, Cold, Altitude*
- ✓ *Solid and Liquid Waste Disposal*
- ✓ *Hazardous Waste and Regulated Medical Waste*
- ✓ *Soil Contamination*
- ✓ *Ambient Air Contamination*
- ✓ *Toxic Industrial Materials*
- ✓ *Occupational Hazards*
- ✓ *Munitions from War (e.g. Depleted Uranium)*
- ✓ *Adverse Weather (Storms)*
- ✓ *Poor Personal Hygiene Habits*
- ✓ *Communicable Diseases (e.g. Anthrax, CA-MRSA)*
- ✓ *Poisonous Plants & Animals*
- ✓ *Displaced Civilians and Enemy Prisoners of War*

EXAMPLES

DNBI Ratio to Combat [*3:1*]

- **Operation Just Cause** (Panama, 1989): heat injuries due to lack of acclimatization & shortage of drinking water

- **Operations Desert Shield/Storm** (Saudi Arabia, 1990-91): poorly controlled sanitation safeguards contribute to diarrheal disease (Shigella)

- **Bosnia** (1996): dining facility implicated in outbreak of Salmonella; cooks prepared eggs held in unrefrigerated CONEX for several days

EXAMPLE

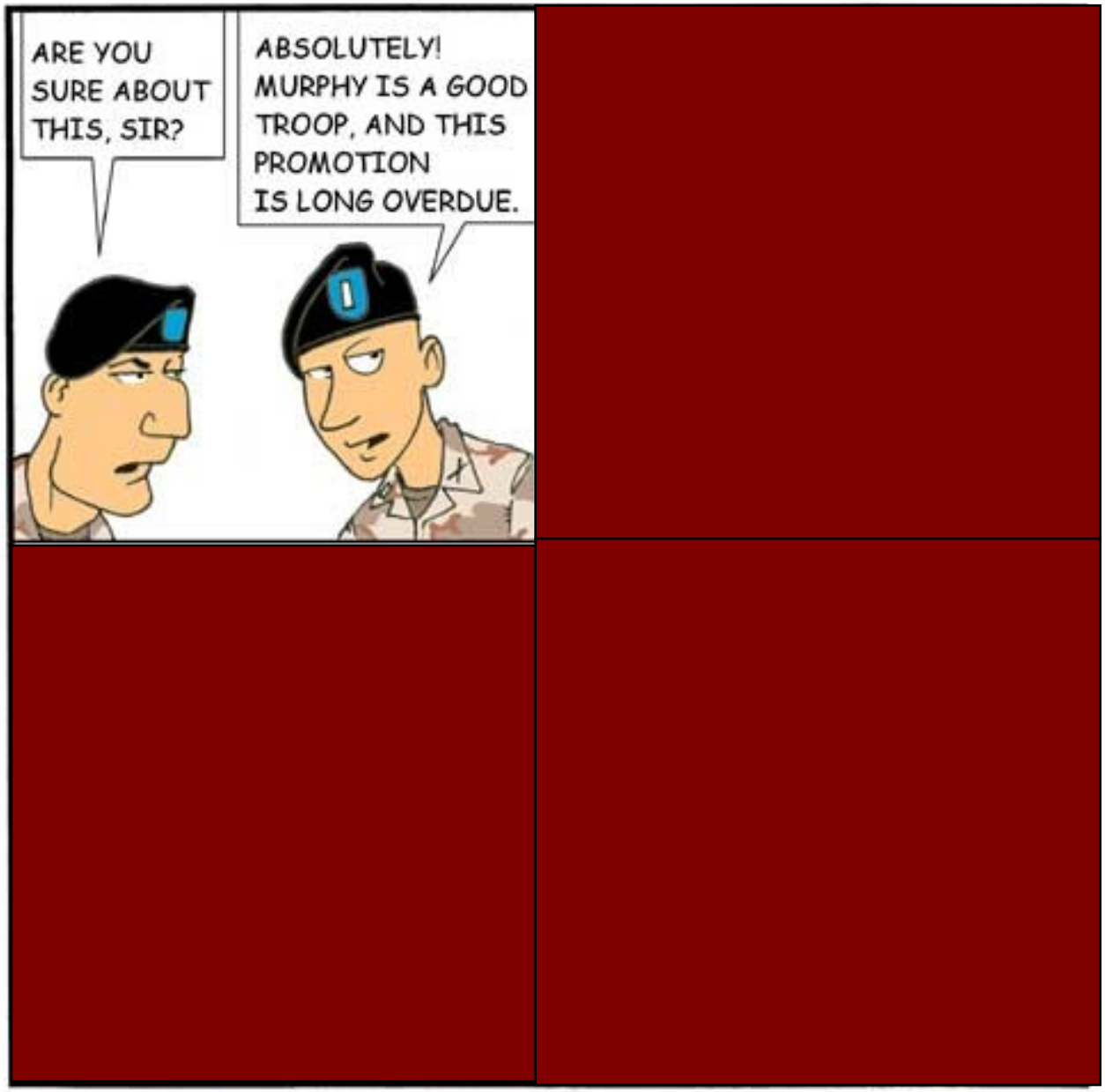
DNBI Ratio to Combat [*3:1*]

A U.S. Commander of a Bright Star operation was eager to reward his troops for a job well done, so he allowed them to go out to eat the night before their scheduled return flight.

The Soldiers ate unapproved food and drank unapproved water.

The next day during the fifteen-hour flight home, more than 30% of the Soldiers suffered from **shigellosis**, which causes projective vomiting and bombastic diarrhea at the same time.

Had this occurred during OIF-OEF, the readiness of the unit would have been significantly impaired and could have resulted in mission failure.


ARE YOU SURE ABOUT THIS, SIR?
ABSOLUTELY! MURPHY IS A GOOD TROOP, AND THIS PROMOTION IS LONG OVERDUE.

FIELD SANITATION TEAM

- AR 40-5**, Chapter 14**
  - Required at Company Level
  - Ideally 1 NCO & 1 Enlisted
  - Must have at least 6 months remaining in unit
  - Formal certification by Preventive Medicine Unit (40 hr Course)
- FM 4-25.12**, UNIT FIELD SANITATION TEAM (JAN 02)**
- FM 21-10**, FIELD HYGIENE AND SANITATION (JUN 00)**

Advise Commander: disinfecting water; food sanitation; personal hygiene; waste management; arthropod/rodent control; injury prevention; Soldier training on PMM

MEDICAL INTELLIGENCE

- U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) http://chppm-www.apgea.army.mil/ (TG 276)
- Armed Forces Medical Intelligence Center (AFMIC) www.afmic.detrick.army.mil (MEDIC CD)
- United States Army Medical Research Institute for infectious diseases (USAMRIID) www.usamriid.army.mil
- Centers for Disease Control (CDC) www.cdc.org
- World Health Organization (WHO) www.who.int
- FM 4-02 (FM 8-10) FORCE HEALTH PROTECTION IN A GLOBAL ENVIRONMENT, FEB 2003

FOOD SERVICE HAZARDS

FOOD

- **Biological**
- **Physical**
- **Sanitation**
- **Time/Temp Controls**
- **Personnel Hygiene**
- **Cross-Contamination**

PERSONAL

- **Cuts and Knife Handling**
- **Burns**
- **Slips, Trips, Falls**
- **Lifting Techniques**

- **Bacterial**
  - *Clostridium botulinum*
  - *Clostridium perfringens*
  - *Escherichia coli*
  - *Listeria monocytogenes*
  - *Salmonella* Typhi
  - *Shigella* spp.
  - *Staphylococcus aureus*
- **Chemical**
  - Marine toxin
  - Heavy Metals (Antimony, Cadmium, Copper, Iron, Tin, Zink)
  - Monosodium Glutamate (MSG)
  - Mushroom Toxins
- **Parasitic**
  - *Cryptosporidium parvum*
  - *Cyclospora cayetanensis*
  - *Giardia lamblia*
  - *Trichinella* spp.
- **Viral**
  - Hepatitis A
  - Norwalk-like
  - Astrovirus

FOOD SAFETY HIT LIST

- Sanitation Center
- Ware Washing
- PHFs
- TTDZ
- Storage Cold & Dry
- Leftovers
- Thermometers
- Tasting
- Handwashing
- Hair Restraints
- Hot Holding
- IPM
- Waste Control
- Labels
- Training & Records
- Equipment
- FIFO
- Thawing
- Structure
- Uniforms & Jewelry
- Smoking

SUMMARY

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Discussion

IF THEY'RE GOING TO MAKE ME EAT THIS STUFF THEY BETTER GIVE ME MORE TOILET PAPER THAN THIS!
MEAL READY TO EAT
pvtmurphy.com
(C) M. Baker 2003

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